## REMARKS/ARGUMENTS

Claims 1, 8 and 15 are pending in the present application. Claims 1, 8 and 15 have been amended, and Claims 2-7, 9-14 and 16-21 have been cancelled, herewith. Reconsideration of the claims is respectfully requested.

### I. 35 U.S.C. § 103, Obviousness

Claims 1, 6, 8, 13, 15 and 20 stand rejected under 35 U.S.C. § 103 as being unpatentable over Hutchison et al. (U.S. Patent No. 7,249,191 B1), hereinafter "Hutchison" in view of Sato et al. (U.S. Publication No. 2003/0041085 A1), hereinafter "Sato". This rejection is respectfully traversed.

With respect to Claim 1, such claim recites "identifying, by the DNS server, a media access control address and a subnet mask using the request". In rejecting the claimed 'identifying' step, the Examiner alleges that Hutchison teaches 'identifying a media access control address *and a subnet mask* using the request' (emphasis added by Applicants) at Hutchison Fig. 7, Col. 4, lines 16-21. Applicants respectfully urge that, and contrary to the Examiner's assertion, Hutchison does not describe any type of subnet mask at either Figure 7 or the cited passage at Col. 4. Instead, there Hutchison states:

> Client 104 then sends out an address resolution protocol (ARP) request containing the IP address (10.0.0.1) of a gateway 116 asking for the corresponding 48-bit Ethernet hardware address, referred to as destination MAC address. Gateway 116 responds with its MAC address, in this example ABCD.

As can be seen, this cited passage describes that an ARP request is sent by a client, and the ARP request contains an IP address of a gateway. The IP address is stated to be 10.0.0.1. This ARP request is asking for the hardware address that corresponds to this gateway. Neither an ARP request, an IP address, or a MAC address teach or otherwise describe a 'subnet mask', and thus the Examiner's characterization that this cited passage at Hutchison Fig. 7, Col. 4, lines 16-21 teaches 'identifying a media access control address *and a subnet mask* using the request' (emphasis added by Applicants) is clearly erroneous.

Claim 1 further recites "returning, by the DNS server, a response to the requestor, wherein the response includes the media access control address and the subnet mask". As can be seen, per this aspect of Claim 1, a response is returned to the requestor, where the response includes *both* the identified media access control address *as well as* the identified subnet mask. The Examiner states that a subnet mask is inherently included in the response packet or else the packet would get lost. As described in great detail in the previously submitted Appeal Brief, inclusion of a subnet mask in the response packet is not inherent. For example, the SYN ACK response packet shown by Hutchison at 64 of Figure 8 (and as described by Hutchinson at col. 4, lines 46-50) where (1) the source node is fully specified (123.0.0.1:80), (2) the destination node is fully specified (10.0.0.2:900), (3) the source MAC address is fully specified (ABCD), and (4) the destination MAC address is fully specified (EFGH). Because both the source and destination nodes and source and destination MAC addresses are fully specified in this response, there is no worry regarding lost packets as this SYN ACK response includes all information needed to unambiguously find/address the source and destination devices without needing to use a subnet mask – further evidencing that the inclusion of a subnet mask in such a response (SYN ACK) to a request (SYN) is not inherent. [1]

The Examiner goes on to cite a new reference to Sato as evidencing the existence of a subnet mask being collected along with a MAC address at Sato Figure 4 and paragraph [0017]. Applicants respectfully submit that Sato does not describe any type of automated retrieval of a subnet mask. Instead, the subnet mask that is shown as being collected in Sato's Figure 4 was *manually input into the system by a system administrator* (Sato paragraphs [0099] and [0100]). Thus, Sato does not overcome the teaching deficiencies identified hereinabove with respect to the particular claimed usage of a subnet mask – including *identifying* a media access control address and *a subnet mask using the request*, or returning a response to the requestor, where *the*

[1] A typical TCP/IP data packet, such as described by the cited reference, includes both a source IP address as well as a destination IP address, but does not include subnet mask information (see, e.g., "TCP/IP Suite attached Attachment C to the Appeal Brief previously filed on July 28, 2008, and specifically note the figure on page 1). Importantly, because the router/gateway provides address translation from the local/private address to the public address (see, e.g., "Network Address Translation" attached hereto as Attachment D), *there is no need or reason to include a subnet mask in normal data packets as such information is internally stored within the router that performs the on-the-fly address translation.* The fundamental reason why this is so is that the subnet mask is specific to the local/private networks and is not typically used by *other* local/private networks as the address translation is transparently performed by a router/gateway that uses such network mask that is internally maintained within the router.

*response includes* the media access control address and the subnet mask. Instead, Sato describes that a subnet mask that is manually input into a system by a system operator is maintained in a data table. Thus, it is further urged that Claim 1 has been erroneously rejected due to the failure of the Examiner to properly establish prima facie obviousness. [2]

In any event, in order to facilitate expeditious allowance of this case, Applicants have amended Claim 1 in accordance with the Specification description at page 12, line 1 – page 13, line 25, and as previously claimed in Claims 3 and 4. It is urged that none of the cited references teach or suggest the interplay between a requestor, a remote computer, a DNS server and a DHCP server that is provided by the features of Claim 1, such as (1) a DHCP server that obtains the media access control address from the remote computer when the remote computer requests an internet protocol (IP) address from the DHCP server; (2) the media access control address and the subnet mask are received from the dynamic host configuration protocol (DHCP) server and are stored in the DNS server; and (3) the DNS server performs each of the receiving, identifying and returning steps. Therefore, it is further urged that Claim 1 is not obvious in view of the cited references, and is now in condition for allowance.

Applicants have also amended Claim 1 to include the features of Claim 6 (which is thus being cancelled herewith, without prejudice or disclaimer), and have further amended Claim 1 to recite that the DHCP server sends an update to the DNS server to place the media access control address and the subnet mask in a cache of the DNS server. None of the cited references teach or suggest such DHCP server/DNS server interplay, and thus it is further urged that Claim 1 is not obvious in view of the cited references, and is now in condition for allowance.

Further with respect to Claim 1, such claim has been amended to recite "wherein the request from the requester is a DNS query that requests a text record associated with the remote computer that is stored in the DNS server", as described on page 12 of the Specification. None of the cited references teach or suggest such DNS query that requests information associated

[2] In rejecting claims under 35 U.S.C. Section 103, the examiner bears the initial burden of presenting a prima facie case of obviousness. *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). Only if that burden is met, does the burden of coming forward with evidence or argument shift to the applicant. *Id.* If the examiner fails to establish a prima facie case, the rejection is improper and will be overturned. *In re Fine*, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In the absence of a proper *prima facie* case of obviousness, an applicant who complies with the other statutory requirements is entitled to a patent. *See In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992).

with a remote computer that is stored in a DNS server, and thus it is further urged that Claim 1 is not obvious in view of the cited references, and is now in condition for allowance.

Further with respect to Claim 1, such claim has been amended to recite "receiving (i) a first DNS query from the requestor for the IP address of the remote computer using the host name of the remote computer and (ii) a second DNS query from the requestor for the text record containing the media access control address and the subnet mask using the host name of the remote computer", as described on page 18 of the Specification. It is urged that none of the cited references teach such two-pronged approach for requesting host information for a remote computer, where a first request is made to a DNS server for an IP address of the remote computer, and a second request is made to the DNS server for a text record that contains the media access control address and the subnet mask of the remote computer. Thus, it is further urged that Claim 1 is not obvious in view of the cited references, and is now in condition for allowance.

Further with respect to Claim 1, such claim has been amended to include the features of Claim 7, where the media access control address, as well as the subnet mask, are both stored in files maintained by the DNS server. None of the cited references teach or suggest a DNS server that maintains files that include such information, and therefore it is further urged that Claim 1 is not obvious in view of the cited references, and is now in condition for allowance.

Applicants traverse the rejection of Claims 8, 13, 15 and 20 for similar reasons to those given above with respect to Claim 1.

Therefore, the rejection of Claims 1, 6, 8, 13, 15 and 20 under 35 U.S.C. § 103 has been overcome.

## II. 35 U.S.C. § 103, Obviousness

Claims 2, 9 and 16 stand rejected under 35 U.S.C. § 103 as being unpatentable over Hutchison and Sato, in view of Bullman et al. (U.S. Publication No. 2002/0162038 A1), hereinafter "Bullman". This rejection is respectfully traversed, as such claims have been cancelled herewith.

Therefore, the rejection of Claims 2, 9 and 16 under 35 U.S.C. § 103 has been overcome.

**III. 35 U.S.C. § 103, Obviousness**

Claims 3, 7, 10, 14 and 17 stand rejected under 35 U.S.C. § 103 as being unpatentable over Hutchison and Sato, in view of Harrison et al. (U.S. Publication No. 2004/0177133 A1), hereinafter "Harrison". This rejection is respectfully traversed, as such claims have been cancelled herewith.

Therefore, the rejection of Claims 3, 7, 10, 14 and 17 under 35 U.S.C. § 103 has been overcome.

**IV. 35 U.S.C. § 103, Obviousness**

Claims 4, 11 and 18 stand rejected under 35 U.S.C. § 103 as being unpatentable over Hutchison and Sato, in view of Matsuda et al. (U.S. Patent No. 7,039,688 B2), hereinafter "Matsuda". This rejection is respectfully traversed, as such claims have been cancelled herewith.

Therefore, the rejection of Claims 4, 11 and 18 under 35 U.S.C. § 103 has been overcome.

**V. 35 U.S.C. § 103, Obviousness**

Claims 5, 12, 19 and 21 stand rejected under 35 U.S.C. § 103 as being unpatentable over Hutchison in view of Bahl (U.S. Patent No. 6,957,276 B1), hereinafter "Bahl". This rejection is respectfully traversed, as such claims have been cancelled herewith.

Therefore, the rejection of Claims 5, 12, 19 and 21 under 35 U.S.C. § 103 has been overcome.

## VI. Conclusion

It is respectfully urged that the subject application is patentable over the cited references and is now in condition for allowance. The Examiner is invited to call the undersigned at the below-listed telephone number if in the opinion of the Examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

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Respectfully submitted,

/Wayne P. Bailey/

Wayne P. Bailey
Reg. No. 34,289
Yee & Associates, P.C.
P.O. Box 802333
Dallas, TX 75380
(972) 385-8777
Attorney for Applicants